

Work Order ID 148208

Monday, June 27, 2016 11:42:12 AM

148208

Page 1

Item ID: D412-698-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Hinge Panel Automatic Door Opener LH OEM Aluminum Door

Start Date: 7/20/2016 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 8/2/2016 Req'd Qty: 1.00 *1*

Customer:

Reference:

DAS

Approvals:

Process Plan:

13

9-89

Date: JUN 27 2016

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr								
DSI 9548	C								

DAS

6

9-89

JUL 14 2016

DAS

21

9-89

1607-15

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

DAS

28

9-89

JUL 26 2016

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPPD412-698-041 CHG001

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

DAS

6

9-89

JUL 18 2016

DAS

27

9-89

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.00

DAS

28

9-89

JUL 26 2016

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
						QC / QA Coordinator Approval			

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____						
Misidentified	☐	Past Due	☐							

Work Order ID 148208***148208***

Page 2

Monday, June 27, 2016 11:42:12 AM

Item ID: D412-698-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Hinge Panel Automatic Door Opener LH OEM Aluminum Door

Start Date: 7/20/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 8/2/2016 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Pick Kit	0.00							
130						DAS 28	DAS 27	JUL 26 2016	
Packaging	Memo	0.00				3-89	3-89		
Packaging	Identify and pack for shipping as per PPP D412-698-041 Location: <u>16022</u> PPP rev: _____								
140	QC21- Final Inspection - Work Order Release	0.00							
140						DAS 21		JUL 27 2016	
QC	Memo	0.02				9-89			
Quality Control									

DAS
21
9-89
JUL 27 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor Approval Verification
					QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Monday, June 27, 2016 11:42:11 AM

Page 1

Work Order ID: 148208

148208

Parent Item: D412-698-041

D412-698-041

Parent Item Name: Hinge Panel Automatic Door Opener LH OEM Aluminum Door

Start Date: 7/20/2016

Required Date: 8/2/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 11.08.18 new issue DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3552-21		Manufactured	No			110	Each	7.0000	1	1			
D3552-21									**				
Door Prop													

DAS
28
9-89

Location	Loc Qty	Loc Code
ST364	7	
128809	2	
146988	5	

DAS
6
27
9-89

D3622-1		Manufactured	No			110	Each	20.0000	1	1			
D3622-1									**				
Ball Stud													

DAS
28
9-89

Location	Loc Qty	Loc Code
ST046	20	
144629	20	

DAS
6
27
9-89

D4330-041		Manufactured	No			110	Each	4.0000	1	1			
D4330-041									**				
Airframe Bracket Assembly, LH													

DAS
28
9-89

Location	Loc Qty	Loc Code
ST093	4	
142655	4	

DAS
6
27
9-89

D4330-3		Manufactured	No			110	Each	9.0000	1	1			
D4330-3									**				
Door Bracket													

DAS
28
9-89

Location	Loc Qty	Loc Code
ST093	9	
142768	9	

DAS
6
27
9-89
JUL 18 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :						
Misidentified	☐	Past Due	☐							

Picklist Print

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Page 2

Work Order ID: 148208

148208

Parent Item: D412-698-041

D412-698-041

Parent Item Name: Hinge Panel Automatic Door Opener LH OEM Aluminum Door

Start Date: 7/20/2016

Required Date: 8/2/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L5

Purchased

No

110

Each

577.0000

1

1

MS21042L5

Nut

**

DAS
6
9-89
DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

95

m127813

95

OVER007

250

m134509

100

m134955

150

ST303

232

m134055

6

m134762

126

m135058

100

NAS1149D0563J

Purchased

No

110

Each

1,565.000

1

1

NAS1149D0563J

Washer

**

DAS
27
9-89
DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

231

m125807

2

m133769

229

ST263

1235

m134497

435

m135058

800

ST269

99

m128257

99

JUL 18 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By _____					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____ _____ _____							
Misidentified ☐	Past Due ☐								

5.0 WEIGHT & BALANCE:

INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D412-698-041 LH (Aluminum door)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-042 RH (Aluminum door)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-043 LH (Composite door)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-044 RH (Composite door)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-043 LH (Spacedoor™)	0.23 lb 0.10 kg	-43.63 in -1.11 m	-10.03 in-lb -0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg
D412-698-044 RH (Spacedoor™)	0.23 lb 0.10 kg	43.63 in 1.11 m	10.03 in-lb 0.11 m-kg	86.27 in 2.19 m	19.84 in-lb 0.22 m-kg

6.0 PARTS LIST:

Qty -041	Qty -042	Qty -043	Qty -044	Part Number	Description
X				D412-698-041	HINGE PANEL AUTOMATIC DOOR OPENER KIT, LH (FOR OEM ALUMINUM DOOR)
	X			D412-698-042	HINGE PANEL AUTOMATIC DOOR OPENER KIT, RH (FOR OEM ALUMINUM DOOR)
		X		D412-698-043	HINGE PANEL AUTOMATIC DOOR OPENER KIT, LH (FOR OEM COMPOSITE DOOR AND DART SPACEDOOR™)
			X	D412-698-044	HINGE PANEL AUTOMATIC DOOR OPENER KIT, RH (FOR OEM COMPOSITE DOOR AND DART SPACEDOOR™)
1	1	1	1	D3552-21	GAS SPRING
1	1	1	1	D3622-1	BALL STUD
1		1		D4330-041	AIRFRAME BRACKET ASSEMBLY, LH
	1		1	D4330-042	AIRFRAME BRACKET ASSEMBLY, RH
1	1	1	1	D4330-3	DOOR BRACKET
		3	3	80-005-2-8	INSERT
1	1	1	1	MS21042L5	NUT
		3	3	MS27039-1-05	SCREW
		3	3	NAS1149D0332J	WASHER
1	1	1	1	NAS1149D0563J	WASHER

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: [Signature]
D. SHEPHERD (DE # 02)

DATE: 12.08.30
CERT. NO.: SH92-43
ISSUE NO.: 5

DESIGN	<u>DP</u>	DART AEROSPACE LTD	
DRAWN	<u>B</u>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. C
MFG. APPR.	N/A	DSI 9548	SHEET 9 OF 9
APPROVED	<u>[Signature]</u>	TITLE	SCALE
DE APPR.		HINGE DOOR OPENER KIT	NTS
DATE	12.08.29	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	